



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,234	11/25/2003	David W. Herbage	A310429.1US	6684
7590	11/03/2004		EXAMINER	
			THOMSON, MICHELLE R	
			ART UNIT	PAPER NUMBER
			3641	
DATE MAILED: 11/03/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.	Applicant(s)	
10/722,234	HERBAGE, DAVID W.	
Examiner	Art Unit	
Michelle (Shelley) Thomson	3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 22 July 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/25/03.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) Notice of Informal Patent Application (PTO-152)  
6) Other: \_\_\_\_\_.

**DETAILED ACTION*****Drawings***

1. The drawings are objected to because the representative boxes in Figure 1 should be labeled (See MPEP 608.02 (d)). Conventional features disclosed in the description and claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing the form of a graphical drawing symbol or a labeled representation (e.g. a labeled rectangular box) as required by 37 CFR 1.83 (a). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Where the written description only implicitly or inherently sets forth the structure, materials, or acts corresponding to a means-plus-function, applicant must clarify the disclosure to **explicitly state**, with reference to the terms and phrases of the claim element, what structure, materials, or acts perform the function recited in the claim elements and equivalents thereof. (See MPEP 2181). Correction of the following is required: applicant must clarify the disclosure to explicitly state, with reference to the terms and phrases of the claim element, what structure, materials, or acts perform the **means for providing** (a zero-twist rifling) recited in the claim elements and equivalents thereof.

*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldsmith (US Patent # 2,993,411). Goldsmith discloses a launcher comprising a base (references 30 and 202), a launch tube (references 101 and 102) interconnected with the base, wherein the launch tube is rotatable relative to the base and a reference axis that extends along a length of and through the launch tube wherein the launch tube is rotatable about the reference axis (Figures 7-9). It is noted that the reference axis of the launch tube would be fixed in the orientation in which the launch tube is oriented at any given time (i.e. during manufacture and

transportation it may have a different orientation than during installation and use, this has not been given any patentable weight since at any time any launcher could potentially have a reference axis that is in a substantially vertical orientation). Goldsmith discloses a hydraulic motor connected with the launch tube wherein at least a portion of the base is disposed between the motor and the launch tube (Figure 2). The launch tube further comprising an outer tube (reference 201), wherein at least a portion of the launch tube is disposed within the outer tube (Figure 10) and the reference axis extends along a length of the outer tube and the outer tube is substantially immobile relative to the base (column 13, lines 70-75).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldsmith as applied to claim 1 above. Goldsmith discloses the claimed invention except for the motor specifically being a servomotor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use any equivalent motor known in the art, since these two motors were art-recognized equivalents for providing rotational movement and/or force at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a servo motor for a hydraulic motor. Furthermore applicant has not disclosed that the specific servo motor solves any stated problem or is for any particular purpose, moreover applicant has specifically disclosed that the servo motor may be any appropriate mechanism

capable of providing movement and/or force to the launch tube (page 13), the motor of Goldsmith is an obvious and appropriate mechanism.

7. Claims 1 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker et al. (US Patent # 4,662,265) and Gassler et al. (US Patent # 4,681,014). Becker et al. discloses a launcher comprising a base (reference 10), a launch tube (reference 5) interconnected with the base, wherein the launch tube is rotatable relative to the base (column 2, lines 30-68) and a reference axis that extends along a length of and through the launch tube wherein the launch tube is rotatable about the reference axis. Although Becker et al. does not expressly disclose the system comprising a countermeasure cartridge and protrusion and groove, Gassler et al. does. Gassler et al. teaches a missile alignment system comprising a countermeasure cartridge (as defined by applicant at page 54, countermeasure cartridge contains payload containing one or more appropriate decoys such as but not limited to infrared and/or radar-reflecting decoys, any device utilized to at least generally deceive distract, divert, lead, and/or lure away an incoming threat, as well as *any device utilized to destroy or deactivate such an incoming threat*), wherein at least a portion of the counter measure cartridge is disposable within the launch tube (reference 6), wherein one of the countermeasure cartridge and launch tube comprises a protrusion (reference 32) and another of the countermeasure cartridge and launch tube comprises a groove (reference 10) complimentarily configured to accommodate the protrusion and wherein a length of the groove is substantially parallel to the reference axis at least when the countermeasure cartridge is disposed within the launch tube (i.e. means for providing a zero-twist rifling). Gassler et al. discloses that the purpose of the system is to eliminate rotational movement or rifling during on-loading of the missile. Becker et al. and Gassler et al. are

Art Unit: 3641

analogous art because they are from the same field of endeavor: missile launchers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the alignment system as taught by Gassler et al. with the launcher of Becker et al. The suggestion/motivation for doing so would have been to obtain a launcher that had decreased rotational movement during on-loading of the missile in order to decrease cable winding and increase precision.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kurth et al. (US Patent # 4,646,618), Kensok et al. (US Patent # 4,934,271), Bar (US Patent # 6,715,397), and Lange et al. (US Patent # 4,305,325).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle (Shelley) Thomson whose telephone number is 703.306.4176. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703.306.4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M Thomson